PARADOX OF INTERTEMPORAL COMPARATIVE ADVANTAGE IN NIGERIA: THE ROLE OF FOREIGN EXCHANGE RATE MANAGEMENT

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ABSTRACT
This paper employed autoregressive distributed lag (ARDL) technique to cointegration to determine the long-run relationship between intertemporal comparative advantage and foreign exchange management in Nigeria. The error correction model of the autoregressive distributed lag approach reveals that the demand for, and supply of, real foreign exchange determines changes in intertemporal comparative advantage in Nigeria as measured by the manufacturing capacity utilization (MCU) in this paper. It was recommended among others that there is urgent need for change in the choice of production techniques that exerts pressure on foreign exchange in order to conserve and stabilize foreign exchange market in Nigeria.

Key words: intertemporal trade, exchange rate, capacity utilization, import dependent

INTRODUCTION
The process of real growth rate presupposes sustained growth in capital accumulation and investment in physical capital in the present for industries production of consumer goods and services in the future. Thus, in the quest for development and macroeconomic stability, nations trade today’s goods (that is, consumption goods) for goods in the future (that is, investment in physical and productive capital), this phenomenon is known as intertemporal trade. A country can trade current consumption for future consumption in the same way that it can produce more of one good by producing less of another (Krugman and Obstfeld, 2009).

Nigeria with a population of over one hundred and fifty million (150,000,000) suggests that she clearly has an intertemporal comparative advantage in the production of future consumption goods. A country is said to have comparative advantage in future production of consumption goods where there exist low relative price of future consumption high real interest rate. In this case, the high real interest rate trade-off resources from current production of consumption goods to production of capital goods for future growth in industry and sustainable development of the economy. Nigeria in the past has invested billions of Dollars on capital goods to include among the following: Ajaokuta Steel company, Metal and tools Osogbo, Delta steel company Warri, Port Harcourt, Warri and Kaduna refineries to mention but a few. Unfortunately, all these capital investments of the past are all moribund, not even the utility companies were spared. Under the guise of privatization, the comatose but surviving government investments have been auctioned to political allies of the governments. Rather than broadened capital base and low relative prices resulting from these investments, the reverse is the case, with raising general prices, lime industrial base and heavily import dependent economy. In this scenario, the exchange rate policy played an overwhelming role, as it is the political philosophy of the government that determines the exchange rate policy choice.

However, the exchange rate (that is, the price of one currency in terms of another) is determined in international trade because the currencies of the trading partners are different. Hence, the exchange rate between two currencies is influenced by the relative strength of the demand for and supply of each of them. Exchange rate therefore, affects macroeconomic stability; import, export, general price level, output, interest rate and investment, as well as economic units such as individuals’ purchasing power. The
gains of present investment in future consumption goods are easily eroded away by the effects of exchange rate with a heavily import dependent economy like Nigeria. According to Chong and Tan (2008) the exchange rate volatility is responsible for economic fundamentals for developing economies, however, one must add here that exchange rate policy choice (whether fixed or floating) of the developing economies determines exchange rate volatility, since exchange rate volatility is a common phenomenon associated with the floating and managed floating exchange rate policy of the developing economies. They also were of the view that the impact of exchange rate volatility on economic fundamentals are substantially great if an economy does not provide tools in hedging currency risks in its markets as is the case in Nigeria. The Nigerian industries are inputs import dependent; equipment, plants, machinery and other raw material need of the Nigerian industries are imported from abroad, yet 80 percent of the country’s foreign earnings comes from oil export (CBN, 2008) indicative of the extent of the exchange rate which is greatly affected by fluctuations in crude oil prices in the international market. Mohammad (2010) suggests that the risk associated with volatile exchange rates are the major impediments for developing economies such as Nigeria that attempt to develop through export expansion strategy and financial liberalization as was the major objective of Structural Adjustment Programme (SAP) introduced in Nigeria in 1986, thus the ongoing import-substitution-industrialization (ISI) strategy and the huge investments by the governments on productive capital was greatly undermined. The cardinal objective of the SAP was the restructuring of the production base of the economy and a sustainable growth of agricultural exports, with the free floating exchange rate policy as its driving force. The Nigerian surrogates of the IMF surrealistically argued that the depreciation of the effective exchange rate of the Naira to the currencies of her trading partners, orchestrated by the market forces of demand and supply will increase the domestic prices of agricultural exports and thereby boost domestic production, and further more will discourage importation. Unfortunately, the reverse was the case, importation soared from 6,895.5 in 1984 to 143,151.2 in 1992 (CBN, 2012). It is instructive to note that the free fall of the value of Naira as occasioned by SAP exchange rate policy resulted in overall changes in the structure and volume of Nigeria’s exports and imports. Thus, the volatility and instability of the exchange rate of the Naira since the introduction of the floating exchange rate management on the intertemporal comparative advantage in Nigeria.

**Objective of the Study**
The general objective of this study is to examine the role of exchange rate management in paradox of intertemporal comparative advantage in Nigeria. However, the specific objectives include;

i. To examine exchange rate management in Nigeria.

ii. To determine the impact of exchange rate on Nigeria’s intertemporal comparative advantage.

**Hypothesis**

H$_{0}$: Exchange rate does not have significant impact on intertemporal comparative advantage in Nigeria.

**Literature Review**

**Exchange Rate Management in Nigeria**

There are two major types of exchange rate policies: the fixed exchange rate and floating exchange rate policy. The fixed exchange rate does not change unless the monetary authority deliberately decides to change it. A free floating exchange rate system or flexible exchange rate system is one in which the exchange rate at any time is determined by the interactions of the market forces of demand and supply for foreign exchange, there is the tendency for the exchange rate of a currency to other currencies under the flexible exchange rate system to change frequently according to the detects of market forces. The success of a flexible rate system requires complimentary policies which can take different forms. However, according to Odoko (2009) the choice of the exchange rate policy has implications for exchange rate management.
Fixed Exchange Rate System in Nigeria

There had been a global fixed exchange rate system in which currencies were linked to gold even before Nigeria gained her independence in 1960. The fixed exchange rate system allowed for unrestricted capital mobility as well as global stability in currencies and trade. Although, the fixed exchange rate system as detected by the Bretton wood institutions of World Bank and the International Monetary Fund (IMF) was abandoned in 1971. Notwithstanding that most African countries abandoned the fixed exchange rate policy on sooner than the collapse of the global fixed exchange rate system in 1972, Nigeria retained its fixed exchange rate policy and operated the fixed exchange rate arrangement in line with the International Monetary Fund’s par value system.

Nigeria currency was initially pegged at par to the British pound sterling, but due to the devaluation of the British pounds in 1967, the Nigerian currency was allowed to move independently and was pegged to the dollar in the basket of currencies. But after the Nigerian pounds was changed to naira in 1973, the naira was further revalued in order to enable the country source inputs cheaply from abroad for the purpose of pursuing her development projects and import-substitution-industrialization strategy, and by 1980 Nigeria had had three petro-chemical plants (refineries), thirty-two (32) petroleum depot, and many more industries scattered all over the country. Following this development, there was rapid depletion of the country’s foreign reserves due to unprecedented importation and outflow of foreign exchange.

In order to address this trend, the monetary authority in 1981 resorted to gradual devaluation of the nominal exchange rate of the naira with a view to reversing the huge importation and foreign exchange outflows. However, by 1985, a single currency intervention system was introduced, which necessitated the quoting of the naira against the US dollar.

The structural adjustment programme (SAP), was introduced in 1986, intended to bring about the evolvement of a realistic exchange rate for the naira, and to restructure the production pattern along Nigeria’s consumption pattern. Within the framework of SAP and with the support of the IMF and World Bank, Nigeria began to re-examine her exchange rate arrangement, which saw Nigeria opting into the floating exchange rate regime.

The Floating Exchange Rate Regime

Under the frame work of SAP, the fixed exchange rate system was replaced with a flexible exchange rate policy, where the system was propelled by market forces and the naira was allowed to find its value according to the forces of demand and supply of foreign exchange. The main distinguishing feature of the foreign exchange market during SAP was the deregulation of activities, the removal of administrative controls. This was brought about by the establishment of the second-tier foreign exchange market (SFEM) in September 1986 which was one of the major components of the programme.

With the introduction of the SFEM the procedure for obtaining foreign exchange changed. The federal ministry of finance lost the power to allocate foreign exchange, but it still had the authority to approve foreign exchange transactions of the public sector. In addition the ministry was empowered in 1989 to grant license for the establishment of bureau de change, that is, private institutions which deal on foreign exchange. This is to enable small users of foreign exchange to obtain it with ease, and by so doing, widen the scope of the officially recognized foreign exchange market. The Central Bank of Nigeria allocated foreign exchange to banks, initially the allocation was made according to quota, but later they were done according to demand.

Theoretical Framework

Mundell – Fleming Model: This is an extension of IS – LM model; it assumes that prices are preset or sticky in the short run. The model clearly presented the inability to achieve perfect capital mobility, monetary policy independence and a fixed exchange rate regime simultaneously a situation called the trilemma. However, the most important exposition of this model’s relevance to this study, is its forecast that devaluation may lead to further devaluation if fiscal discipline, inflation and the balance of payments are not well managed, and the proposition that the impact of devaluation on current account improvement may be weakened if an economy is heavily dependent on import of inputs by its industries. The exchange rate of the naira have consistently been devalued and depreciated since the introduction of the floating
exchange rate regime of SAP in 1986 over this period, the gains of SAP/float exchange rate are the huge shrinking of the Nigerian production base (the flourishing textile industry before the SAP have disappeared), the three refineries in the country are not in operation due to excessive high-cost-of spare part for their maintenance, and so the huge sacrifice of our yesterdays’ consumption could no longer provide for today’s consumption, let alone tomorrow’s. The intertemporal comparative advantage of huge investments by the governments before SAP has been severely undermined.

**Balassa – Samuelson Hypothesis:** The basic proposition of this model is that countries with higher productivity in tradables compared with non-tradable tend to have high price levels. The productivity gains in the tradables allow real wages to increase commensurately, since wages and prices also increase in the nontradables. This leads to an increase in the overall price level in the economy, which in turn results in an appreciation of the real exchange rate. However, deterioration in the terms of trade would not only affect trade balances of a country, but leads to decrease in domestic aggregate demand and prices. Consequently, exchange rate will depreciate as is the scenario since the introduction of SAP and subsequently the floating exchange rate regime in Nigeria.

**Empirical Framework**

Akpakpan (1994) in his work “How to save the naira and Nigeria” suggested the need for carefully thought out two-tier exchange rate policy in the short-term, comprising: (1) a fixed exchange rate system, and (2) a floating exchange rate system. The fixed exchange rate component of the policy could be used for transactions affecting strategic activities in the economy while the floating exchange rate would be operated for all other transactions and the government must be straight in her fight against corruption in order to check abuses.

Sanni (2006) drawing inference in his work “The challenges of sustainability of the Current Exchange Rate Regime in Nigeria” concluded that for the sustainability of WDAS, it is important to ensure sound macroeconomic environment, fiscal sustainability, improved corporate governance, and effective risk management process. He further added that a sound financial system that ensure an efficient and stable exchange rate mechanisms and contribute to the development of the financial markets need to be guaranteed.

Obi, Wafure and Abu (2010) in their study “Determinants of exchange rate in Nigeria, 1970 – 2007: An empirical analysis”, concluded that productivity differentials significantly affects exchange rate in Nigeria. An increase in productivity differentials will lead to substantial appreciation in the exchange rate. Kuijs (1998) in his work ‘determinants of inflation, exchange rate, and output in Nigeria’ using the VAR technique, a dynamic model was estimated in which the disequilibria in the markets for broad money, foreign exchange and the non-oil goods were allowed to influence the price level, the real exchange rate and output. The results were in consonance with the classical preposition concerning the real and monetary sectors of the economy. Prices, real exchange rate and non-oil output were attracted to long-run equilibrium that mainstream economic theory suggests.

Chigbu and Okonkwo (2014) in their work “monetary policy and Nigeria’s quest for import substitution industrialization” using the error correction mechanism came to the conclusion that money supply exact tremendous pressure on industrial output in Nigeria, the study strongly collaborates the new quantity theory of money lead by Melton Friedman preposition which suggests that money supply is directly proportionate to real national income. Thus, monetary policy variables which include exchange rate the study exact immense impact on industrialization in Nigeria.

**METHODOLOGY**

**Data Sources**

The data for this study was sourced from wide range of sources to include; The central Bank of Nigeria’s (CBN) statistical bulletins of various issues including 1996, 2006, 2010, 2012 and 2013 editions, National Bureau of statistics (NBS) statistical fact sheets, 2012 edition; CBN annual reports 1994, 2010 and 2012 editions; some data was complimented and sourced from web sites which include: www.economywatch.com, www.indexmundi.com and www.knoema.com
Data Description
The integral concern of this study is to investigate the long-run relationship between exchange rate policy and the Nigeria intertemporal comparative advantage, and evaluate the short-run dynamic in this relationship from 1970 to 2013. Since intertemporal comparative advantage relates to low relative price of future consumption goods, while on the other hand, manufacturing capacity utilization is the percentage of actual output to installed capacity, where its persistent increase above normal level, suggest that new investments are profitable and guarantees persistent growth in output and consequently low relative prices for future manufactured consumption goods. Based on this premise the researcher considered manufacturing capacity utilization (MCU) in Nigeria a good proxy to intertemporal comparative advantage in Nigeria.

In addition to exchange rate as an explanatory variable, foreign reserve (FR) and inflation (INF) were included as explanatory variables. External reserve (FR) is considered an important explanatory variable in this study because as shown in this study, exchange rate management exerts tremendous pressure on the external reserve, thus, undermining the value of the local currency to that of her trading partners, and also the terms of trade for the countrys export, thus, resulting to inflation and high relative price of future consumption goods in the economy. In the same vein, inflation (INF) as a measure of macroeconomic performance with direct influence from exchange rate depreciation is considered an important explanatory variable in this study. Thus, exchange rate, external reserve and inflation is regressed on the manufacturing capacity utilization in Nigeria.

Model Specification
In modeling, the relationship between intertemporal comparative advantages as measured by manufacturing capacity utilization (MCU) and macroeconomic performance indicators included in this study as following; exchange rate (REX) external reserve (FR), and inflation rate (INF), current period MCU realization is typically thought of as influenced by past realization of MCU including current and past realization of macroeconomic performance indicators included in this study. Thus, the baseline model to be estimated for this study is first specified in the following functional form as shown below.

\[ MCU = F (REX, FR, INF) \quad \ldots (1) \]

Where:
- MCU is manufacturing capacity utilization
- REX is exchange rate
- FR is External reserves, and
- INF is inflation

To obtain an estimate linear function, Equation (1) was rewritten as;

\[ MCU = \alpha + \alpha_1 REX + \alpha_2 FR + \alpha_3 INF + \epsilon_t \quad \ldots (2) \]

The autoregressive distributed lag (ARDL) estimation technique put forward in Pesaran and Shin (1999) and Pesaran, Shin, and Smith (1996, 2011) also known as the bounds testing cointegration technique is employed in this study to determine the long-run relationship between manufacturing capacity utilization and the selected macroeconomic performance indicators in Nigeria. The choice of this technique became vital and most appropriate because this estimation technique has the ability to deal with relationship irrespective of whether the regressors are I(0) or I(1). However, as noted by Quattara (2004), the presence of I(2) variables renders the computed F-statistics of the bounds test invalid since, they are based on the assumption that the variables are either I(0) or I(1) and in some case mutually cointegrated. The bounds testing cointegration technique involves two stages. The F - statistic for testing the significance of the variables of the ARDL model is computed, and the F - statistic is then used to determine the existence of a long-run relationship between the regressand and the regressors under investigation. Equation (2) is estimated by the OLS procedure to obtain the vital F-statistics, thereafter, the coefficient diagnostic test is conducted to obtain the relevant F-statistic from the OLS result. The applicable hypothesis is the null hypothesis of no long-run relationship, such as:

- \( H_0 \): \( \lambda_1 = \lambda_2 = \lambda_3 = \lambda_4 = 0 \) (no long-run relationship)
- \( H_1 \): \( \lambda_1 \neq \lambda_2 \neq \lambda_3 \neq \lambda_4 \neq 0 \) (there exist long-run relationship)

If there is a long-run relationship, between the variables, that is, the estimated variables are cointegrated, and the estimated relationship not spurious, then estimated coefficient of the long-run relationship is
analyzed and the error correction model may then be estimated. Equation (2) is further expressed in the
generalized autoregressive distributed lag (ARDL) model of the form ARDL(p; q₁; q₂; …qₖ). Such that:

\[ k
\]

\[ \beta(L,p)y_t = \sum_{i=1}^{k} \beta_i (Lq_i)x_{it} + \beta w_t + \epsilon_t \]  

... (3)

Where

\[ \beta(L,p) = 1 - \beta_1 L - \beta_2 L^2 - \ldots - \beta_p L^p \]

\[ \beta_i (Lq_i) = 1 + \beta_1 L + \beta_2 L^2 + \ldots + \beta_{iq_i} L^{q_i} \]

Since there is evidence of a long-run relationship among the variables included in Equation (2), the
following long-run model will be estimated

\[ MCU_t = \alpha + \sum \alpha_{i1} MCU_{t-1} + \sum \alpha_{i2} REX_{t-1} + \sum \alpha_{i3} FR_{t-1} + \sum \alpha_{i4} INF_{t-1} + \epsilon_t \]  

... (5)

Having estimated Equation (5) in three models with a maximum lag (p) of order 2, 4 and 6 respectively,
the model of a maximum lag(p) of order 2 has the lowest AIC and SIC values, hence model (Lag 2) is
selected to estimate Equation (5)

This is then followed by the ARDL specification of the short-run dynamics, derived from the error
correction model (ECM) of the form:

\[ MCU_t = \alpha + \sum \alpha_{i1} \Delta MCU_{t-1} + \sum \alpha_{i2} \Delta REX_{t-1} + \sum \alpha_{i3} \Delta FR_{t-1} + \sum \alpha_{i4} \Delta INF_{t-1} + \delta ECM_{t-1} + \epsilon_t \]  

... (6)

Where : \( \Delta \) is the differenced operator, ECM_{t-1} is the error correction term and \( \delta \) is the speed of
adjustment parameter, measuring the speed errors generated in one period are corrected in the following
period.

**DATA ANALYSIS AND RESULTS**

In order to validate the choice of technique for this study, it became imperative that test for the order of
cointegration is conducted to ensure that there is no I(2) cointegrating equation in the series. Thus a unit
root test would provide important information to justify the choice of the ARDL estimation technique for
this study. Interestingly the ADF test statistic result as shown in table 2 revealed that the order of
cointegration among the variables, comprise of I(o) and I(1) series, making the choice of ARDL
technique an appropriate estimation technique for this study.

**Table 1 : Long Run Result**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>28.67712</td>
<td>9.152680</td>
<td>3.133194</td>
<td>0.0033</td>
</tr>
<tr>
<td>MCU(-1)</td>
<td>0.500382</td>
<td>0.133380</td>
<td>3.751541</td>
<td>0.0006</td>
</tr>
<tr>
<td>REX(-1)</td>
<td>-0.010791</td>
<td>0.064005</td>
<td>-0.168593</td>
<td>0.8670</td>
</tr>
<tr>
<td>FR(-1)</td>
<td>2.71E-05</td>
<td>0.000247</td>
<td>10.9849</td>
<td>0.9131</td>
</tr>
<tr>
<td>INF(-1)</td>
<td>-0.166292</td>
<td>0.145213</td>
<td>-1.45163</td>
<td>0.2593</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.354736</td>
<td>Mean dependent var</td>
<td>51.46256</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.286814</td>
<td>S.D. dependent var</td>
<td>16.86532</td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>14.24282</td>
<td>Akaiake info criterion</td>
<td>8.259328</td>
<td></td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>7708.605</td>
<td>Schwarz criterion</td>
<td>8.464118</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-172.5755</td>
<td>Hannan-Quinn criter.</td>
<td>8.334848</td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>5.222661</td>
<td>Durbin-Watson stat</td>
<td>1.735562</td>
<td></td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.001878</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Proceeding with the ARDL technique to cointegration analysis as advanced by Pesaran, Shin & Smith (2001), the null hypothesis of non-existence of a long-run relationship among all stationary series included in Equation (5) is to be tested. The main interest here is to find where the computed F-statistic of the long-run model using OLS estimation technique falls. The result of the OLS reported in table 1 revealed that the computed F-statistics is 5.222661 as shown in table 1 and supported by the result of joint test of coefficient using the Wald test as also shown in table 5. This value of the F-statistic (5.222661) is greater than the critical upper bounds values of 4.35 at 5 percent level of significance. Thus, the test results indicate that there exists a long-run relationship between MCU and REX, FR & INF.

Table 2: Augmented Dickey – Fuller test statistic

<table>
<thead>
<tr>
<th></th>
<th>t - statistic</th>
<th>Critical values 1%</th>
<th>Critical values 5%</th>
<th>Critical values 10%</th>
<th>Prob.</th>
<th>Order of Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>D(MCU)</td>
<td>-3.674484</td>
<td>-3.592462</td>
<td>-2.931404</td>
<td>-2.603944</td>
<td>0.0081</td>
<td>I(0)</td>
</tr>
<tr>
<td>D(REX)</td>
<td>-5.997661</td>
<td>-3.596616</td>
<td>-2.933158</td>
<td>-2.604867</td>
<td>0.0000</td>
<td>I(1)</td>
</tr>
<tr>
<td>D(FR)</td>
<td>-4.747107</td>
<td>-3.600987</td>
<td>-2.935001</td>
<td>-2.605836</td>
<td>0.0004</td>
<td>I(1)</td>
</tr>
<tr>
<td>D(INF)</td>
<td>-3.782934</td>
<td>-3.596616</td>
<td>-2.933158</td>
<td>-2.604867</td>
<td>0.0061</td>
<td>I(0)</td>
</tr>
</tbody>
</table>

Table 3. ARDL Technique for determination of cointegration

<table>
<thead>
<tr>
<th></th>
<th>Lower Bound I(0)</th>
<th>Upper Bound I(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1%</td>
<td>4.29</td>
<td>5.61</td>
</tr>
<tr>
<td>5%</td>
<td>3.23</td>
<td>4.35</td>
</tr>
<tr>
<td>10%</td>
<td>2.72</td>
<td>3.77</td>
</tr>
</tbody>
</table>

*Critical value Bounds of the F-Statistic are from Pesaran, Shin, and Smith (2001)

The result of the estimates of the long-run coefficient based on the ARDL model specified in Equation (5) reveal that the past value of manufacturing capacity utilization (MCU_{t-1}) is significant at one percent and will generate a less than proportionate change in MCU over the long-run, indicating that the MCU as a measure of intertemporal comparative advantage is less sensitive to change in its past value, other explanatory variables included in the model are statistically not significant at all traditional levels 1%, 5% and 10%. However, the result of the joint test reported in table 5 reveal that jointly all explanatory variables included in the estimated long-run model are statistically significant at one percent level, meaning that jointly, the explanatory variables influence change in MCU.

To ensure that there is no serial correlation in the long-run model, the null hypothesis that there is no serial correlation is tested, with a guideline to accept the null hypothesis (H_o) if probability is greater than five percent. The result reported in table 6 reveals that there is no serial correlation. In the same vein, the stability test result as reported in figure 1 reveals that the cusum plots did not cross the 5 percent critical lines, indicating that the model is stable.
The result of the estimates of the error correction model associated with the long-run estimates presented above is reported in Table 4. The estimated error correction model provides information on the short-run relationship among MCU and REX, FR, INF. These variables are reported in their (lagged) difference. The variables are individually significant, except for inflation rate (INF) indicating that significant short-run impact is exerted by the past value of MCU, REX and FR on MCU. Jointly all explanatory variables are significant at 5 percent level, implying that jointly all explanatory variables exert significant impact on the intertemporal comparative advantage as measured by MCU in the short-run as reported in Table 7. This model was also tested for serial correlation and the result as reported in Table 8 indicated the absence of serial correlation. The model was also tested for stability and the result as presented in Figure 2, indicated that the cusum plots did not touch the 5 percent critical lines, hence the model is stable and can be used for meaningful inferences and prediction.

CONCLUSION
This study estimated a model that indicated a long-run relationship among MCU as a measure of intertemporal comparative advantage and its explanatory variables included in this study (foreign exchange rate, foreign reserve and inflation) using autoregressive distributed lag (ARDL) approach to cointegration. Thereafter a dynamic model was estimated which revealed that all explanatory variables apart from inflation influence change in MCU as a measure of intertemporal comparative advantage in Nigeria. That is, the expected low relative price of future consumption goods (intertemporal comparative advantage) as a result of today’s investments on capital goods is determined by real demand for, and supply of foreign exchange and Nigeria’s foreign reserve.

RECOMMENDATION
The researcher strongly recommends that the government revisit the ongoing foreign exchange policy that have involved since that introduction of SAP in Nigeria. Although, emerging consensus favor economic deregulation/liberalization, this study calls for total review on the basis that the so-called consensus is based on ideological and emotional commitment to free market and not on a sound analysis of economic situations in Nigeria.
Also, the choice of technique of production that exerts pressure on foreign exchange as a result demand for imported inputs must be reviewed so as to engage the abundant labour force and mineral resources in the country. This will not only stabilize the foreign exchange market, but will conserve our foreign reserve, and further guarantee low relative price for future consumption goods in Nigeria.

There is also urgent need for export diversification in the Nigerian economy and impetus given to agriculture and solid minerals.

Finally, to guarantee relative future price of consumption goods, the government must improve power supply transportation and qualitative education that provides the required technical man power needs for our industries. These will greatly cut-down costs of production and increase profitability which will stimulate growth in output and subsequently, employment and future relative price of consumption goods in Nigeria.

REFERENCES

Appendix

Table 5: Wald Test

<table>
<thead>
<tr>
<th>Test Statistic</th>
<th>Value</th>
<th>df</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>5.222661</td>
<td>4, 38</td>
<td>0.0019</td>
</tr>
<tr>
<td>Chi-square</td>
<td>20.89064</td>
<td>4</td>
<td>0.0003</td>
</tr>
</tbody>
</table>

Table 6: Serial Correlation Test

<table>
<thead>
<tr>
<th>Breusch-Godfrey Serial Correlation LM Test:</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
</tr>
<tr>
<td>Obs*R-squared</td>
</tr>
</tbody>
</table>
Table 7: Wald Test of the Dynamic Model

<table>
<thead>
<tr>
<th>Test Statistic</th>
<th>Value</th>
<th>df</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>2.656606</td>
<td>(6, 33)</td>
<td>0.0325</td>
</tr>
<tr>
<td>Chi-square</td>
<td>15.93964</td>
<td>6</td>
<td>0.0141</td>
</tr>
</tbody>
</table>

Table 8: Serial Correlation Test of the Dynamic Model

<table>
<thead>
<tr>
<th>Test Statistic</th>
<th>Value</th>
<th>Prob. F(2,31)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>0.255032</td>
<td>0.7765</td>
<td></td>
</tr>
<tr>
<td>Obs*R-squared</td>
<td>0.663681</td>
<td>0.7176</td>
<td></td>
</tr>
</tbody>
</table>